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Computer Assisted Instruction and the Basic Writer

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COMPUTER ASSISTED INSTRUCTION

AND THE BASIC WRITER
(TITLE)

BY

KATHY FORD

THESIS

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DEDICATION

To my husband, Terry, who has
been patient while I decided
what I wanted to do when I
grew up.

To my children, Aaron, Jonathan, Blossum and Joshua,
who have had to share Mom with her work.

To my Lord, Jesus Christ, who
has given me wisdom, direction, strength, and comfort.

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CHAPTER 1

THE CHALLENGE OF TEACHING BASIC WRITERS

Mina Shaughnessy, in her landmark work *Errors and Expectations*,[1] states that

> a strong egalitarian thrust within higher education has not only brought a new kind of student into the four-year college but has caused the community colleges to flourish throughout the country, and wherever the new students have arrived in substantial numbers English teachers have begun to realize that little in their background has prepared them to teach writing to someone who has not already learned how to do it. (121)

The unprepared student thrust into the academic setting poses new problems to institutions of higher learning. Colleges and universities throughout the United States are becoming aware of the lack of preparation some students are receiving prior to attending a post-secondary institution. English teachers, particularly, are realizing that the assumption that all college students are capable of writing a logical, competent essay is not an accurate assumption.

Shaughnessy notes that

> emphasis upon propriety in the interest not of communication but of status has narrowed and debased the teaching of writing, encouraging at least two tendencies in teachers--a tendency to view the work of their students microscopically, with an eye for forms but with little interest in what was being said, and a tendency to develop a repugnance for error that has made erring students feel like pariahs and allowed teachers of mediocre talent too many easy victories. (120)

Many of the students unprepared for the demands of academic writing are being placed in classes variously termed "developmental" or "basic" or even "remedial." These students pose special challenges to the teacher. Just as varied as the students are the means by which a teacher can instruct the unprepared student. Among the tools available to the instructors are the micro computer and computer-assisted instruction. In order to understand how computers and computer-assisted instruction can help writers, particularly

those defined as basic writers, we must investigate who a basic writer is, what kinds of problems can be addressed by computer-assisted instruction, and what kinds of computer-assisted instruction are available.

WHO IS A BASIC WRITER?

Lynn Quitman Troyka, in her article "Defining Basic Writing in Context," notes that the definitions of "a basic writer" are as diverse as the number of people doing the defining (3). In Errors and Expectations Shaughnessy defines basic writers as "beginners" and

> those who had been left so far behind the others [students] in their formal education that they appeared to have little chance of catching up, students whose difficulties with the written language seemed of a different order from those of the other groups, as if they had come, you might say, from a different country, or at least through different schools, where even very modest standards of high-school literacy had not been met. (2)

From this definition we learn that, for whatever reason, basic writers differ from traditional college students in that they are educationally unprepared to succeed in a course where writing is a major component. Basic writers also differ from students who have succeeded in their high-school years by writing in a predictable and "safe" style i.e., not willing to take chances in diction or form.

The basic writer (BW) also differs from other groups of under- or ill-prepared students, such as the student with a learning disability or the student whose primary language is something other than English. A student with a learning disability may not be able to learn in a traditional manner because of physical reasons. The English as a Second Language (ESL) student may have studied traditional English grammar but has had little practice in writing in an all-English environment. The basic writer, however, has gone through the educational system and been graduated from high school without learning all the skills necessary to succeed at the college level. Because of active recruitment for students, more and more colleges and universities are broadening their criteria for admission; thus basic writers, even with their educational problems, are able to pursue a college degree. They bring with them the desire to succeed and to grow, but at the same time they know they are not prepared for the rigorous demands they will have to face in their classes.

The characteristics of a basic writer are almost as diverse as the definitions of a basic writer. Troyka provides some perspectives on the non-traditional student, however, which could certainly include the basic writer. In her article "Perspectives on Legacies and Literacy in the 1980's," she notes there are four major "legacies" the non-traditional student brings to a learning situation. By understanding these legacies the college instructor can adapt his or her teaching methods to better help these students. Since conventional methods, such as lectures and workbooks, did not help these students while they were in high school, they are unlikely to work in college; therefore, new and/or different methods must be developed.

The first legacy Troyka notes is that "non-traditional students are highly gregarious and social" (20). Perhaps because they have not been very successful in the academic setting, they tend to be more comfortable in a "safe" learning environment that includes friends and social contacts. It is only when students feel safe and accepted that they will be relaxed enough to learn.

A second characteristic Troyka notes is that "non-traditional students are more comfortable in an oral rather than a writing mode" (22). This is an echo of Shaughnessy's work that also notes the difficulty BW students have overcoming oral influences in their writing. Whether the student has a black dialect or simply comes from a background that does not engender standard English, a basic writer looks at writing as "a trap, not a way of saying something to someone" (Shaughnessy 7). BWs are more comfortable with speaking and receiving immediate feedback for understanding than writing and waiting for an indication, usually from the teacher, that they are truly communicating.

A third characteristic is that "non-traditional [BW] students are holistic thinkers" (Troyka 22). Basic writers look at written language as a whole and have difficulty relating to the smaller parts that make up the larger patterns. Troyka suggests that teaching from the "bottom up"--that is, teaching the parts of a sentence, for example, instead of the composition as a whole--does not work well

with students having difficulty with the writing process (23). These students must see the completed "puzzle"--the whole composition--before the individual pieces will begin to fit into their own learning system and make any sense to them.

The fourth and last "legacy" that Troyka discusses is, perhaps, the most troubling for the teacher: "Non-traditional students are ambivalent about learning" (24). Troyka notes they want to learn but they resist the changes learning might bring to their lives. They also resist because of their fear of failure. Because the success rates for these students are low, they are hesitant to change. As Shaughnessy notes:

> By the time he reaches college, the BW student both resents and resists his vulnerability as a writer. He is aware that he leaves a trail of errors behind him when he writes. He can usually think of little else while he is writing. But he doesn't know what to do about it. Writing puts him on a line, and he doesn't want to be there. (7)

WHAT ARE THE COMMON ERRORS OF BASIC WRITERS?

Shaughnessy states that "a person who does not control the dominant code of literacy in a society that generates more writing than any society in history is likely to be pitched against more obstacles than are apparent to those who have already mastered that code" (13). Recognizing there are basic writers in the higher-education system is not enough. Creating special instruction for these students entering a college or university is a first step, but may not be as effective as it could be without knowing more about why such students write the way they do. Shaughnessy looks at the errors typical BW students make and organizes them into four categories: handwriting; the traditional grammar as found in most writing handbooks (i.e., syntax, punctuation, inflections, agreement); the manipulation of words (i.e., spelling and vocabulary); and the essay as a whole (i.e., organization, audience).

1. Handwriting

Shaughnessy begins her work by noting something often overlooked in a college setting: "The physical act of writing, of moving the pen or pencil (or typewriter) across the page so as to form decipherable words without great effort, is of course fundamental to their writing skills" (15). Instructors naturally assume if a student has succeeded in an academic career far enough to be enrolled in a college or university then he or she must know how to write physically. But Shaughnessy points out that the BW writes infrequently, usually less than 350 words a semester (14). The BW is thus unpracticed in the physical action of putting words to paper. Moreover, words are often blurred because the student is unsure of the usage or spelling and feels it is easier to make the reader unsure than to write clearly and be subjected to failure. Some BWs master the manual skill of writing and sometimes turn this skill into a graphic art, but they are still unable to convey meaningful content.

Shaughnessy suggests the best way for BWs to overcome the problems with handwriting is to practice,

practice, practice. She suggests this practice come in a mode that would encourage a flow of words, such as journal writing, free writing, and recording. If the handwriting of the student is so illegible as to make the essay unreadable, Shaughnessy urges that the student be taught typewriting. She notes the success of a course in typewriting taught to twenty BW students at City College of New York (16). Had the micro-computer been available at the time Shaughnessy was writing, I am sure she would have suggested BW students be taught word processing.

2. Traditional Grammar

Shaughnessy devotes much of her work to the area traditionally taught from the college handbook. She breaks down the areas of error into smaller categories, such as punctuation, syntax, and those she terms "common errors."

Punctuation

Shaughnessy points out that BW students have difficulty with punctuation not because they are unable to use it but because they do not fully understand the way in which punctuation "serves to signal structural, semantic, and rhetorical meanings that would otherwise be missed by the reader" (17). Shaughnessy's work examines why BWs fail to put in punctuation where needed and how they use it in inappropriate places. The reasons for these errors are complex and range from misinformation to a lack of familiarity with the basic sentence. Shaughnessy explains:

> In other words, punctuation becomes a problem for the BW student, not because he has no competence with sentences at all but because the writing down of sentences introduces new competencies that he has not been taught, including not only a knowledge of the names and functions of the various marks but also an ability to manage the structures that writers depend upon to overcome the redundancy, fragmentation, and loose sequencing that are natural in speech. (27)

Shaughnessy suggests that the BW student be taught punctuation, not by beginning with the marks, but by beginning with the structures that elicit the marks. She recommends the student be taught four structural concepts: how to recognize and create simple subject and predicate phrases; how to embed sentences within sentences (focusing on *who*, *which*, *that*, *when* and *if* forms); how to embed appositional forms; and how to embed -ing phrases. While this instruction is going on, the relevant marks are fitted into the sentence at the appropriate junctures. As Shaughnessy so succinctly puts it, "What [the BW] needs is a sequence of lessons with accompanying exercises that clarify what is going on in sentences so that the rules of punctuation can be consistently applied" (41).

Syntax

Shaughnessy also points out that "Syntax is generally, and loosely, used by teachers to mean the 'big' problems in sentences--problems that keep a sentence from 'working' or being understood as opposed to those that keep it from being

appropriate to a specific situation" (47). She notes syntactic errors can be organized under the general headings of accidental errors, blurred patterns, consolidation errors, and inversions.

Accidental errors are those that can be more or less easily spotted when the writing is proofread. They include skipping words or misusing small words such as my for by. They are the "kinds of errors that the writers usually catch themselves once they see them (not an easy skill for a beginning writer, who tends to see what he means rather than what he writes)" (48).

Blurred patterns are the errors made by combining features of several patterns that create a "kind of syntactic dissonance." Examples of blurred patterns would be using the phrase "on the average" instead of "for the average" or "at least I can say" instead of "the least I can say"(49).

Consolidation errors can take two forms with the BW student: he or she either abandons any attempts to consolidate sentences or allows the subordinate structures to

"tumble out on the page"(53). The BW student has difficulties with coordinate consolidations, subordinate consolidations, and juxtaposition consolidations. For example, the BW student might depend upon connectors like and or but to sustain a flow of sentences that should be broken into smaller units. Adverbial or that clauses may become fillers that make the BW's sentences unclear.

Inversion errors are the last syntactical difficulty error Shaughnessy mentions within her study of the BW and syntax. These errors are not made so much by the absence or addition of subordinate structures within the sentence but by rearranging the structures in the sentence. These inversions sometimes occur when relative pronouns are used as inverted direct objects or by misusing the expletive "it is," for example.

Shaughnessy offers a great deal of advice on how to help the BW student control the intricacies of syntax. She notes that "the inexperienced writer is indeed not likely to have command of the language he needs to bring off the consolidations that are called for in writing" (73). With this in mind she suggests the student work with words in

different contexts and writing situations. She also suggests exercises in sentence combining and the basics of traditional grammar can help a student to become more familiar with the ways a sentence works.

Shaughnessy also notes that "the beginning writer does not know how writers behave" (79). The BW does not realize there is a vast difference between spoken and written language and thus imposes the conditions of speech upon writing. The BW student tends to think once words are written on paper they cannot be changed, just as once a word is spoken it can never be "erased." Shaughnessy goes on to suggest that teachers instruct their students in a way that emphasizes the process of writing and not the finished product. This kind of instruction would provide the opportunity for students to revise and rewrite more than just once or twice. Process-oriented instruction would allow students to see writing in progress being done by others, either their peers or published writers. A collaborative learning environment could be the answer for many BW students, especially in view of their needs for social interaction.

One of the most important suggestions that Shaughnessy offers for reducing syntax error is building the confidence of BW students. She notes that "the student lacks confidence in himself in academic situations and fears that writing will not only expose but magnify his inadequacies" (85). Since writing in an artificial environment about artificial subjects does nothing to build the self-esteem of the struggling writer, she suggests that the student be given an opportunity to write about what he or she already knows as a speaker. The opportunity to write about what is familiar would result in increased practice.

Common Errors

Common errors are those errors involving verbs, nouns, pronouns, and subject-verb agreement. The errors within these groups include inflections, possessives and plurals, tenses, shifts in person, shifts in number, antecedent problems, and agreement between subjects and predicates. Shaughnessy notes that these are not generally careless errors of the BW student. Instead, they are a result of

"first-language interference" -- that is, learning informal English or a dialect that conflicts with formal writing and speaking -- and a lack of intensive study and practice (93).

Shaughnessy advocates that grammar taught as a way of thinking instead of a way of being correct is one way to overcome common errors (129). Exercises that expose the students to right and wrong examples will help them to realize their own intuitive sense of what is correct. This realization, in turn, will build confidence in the students' abilities to spot errors of their own.

Shaughnessy also suggests that

> grammar students study for the purpose of reducing error should accomplish two objectives: introduce them to several key grammatical concepts that underlie many of their difficulties with formal English and equip them with a number of practical strategies for checking on their own writing. (130)

The grammar study that she suggests would center around the sentence, inflection, tense, and agreement. This instruction would give the student "a conceptual frame within which to

view his own difficulties in those areas" (137), providing a means of thinking through problems as they arise instead of trying to memorize rules or definitions.

3. Manipulation of Words

The third major area that Shaughnessy addresses in her work is that of the manipulation of words, particularly spelling and vocabulary. She notes that, again, it is not inability that plagues the BW writer but inexperience.

Spelling poses special problems for the BW student:

> The ability to spell grows slowly out of a number of different kinds of encounters with words--with the sounds of words. . ., the looks of words on paper . . . , the feel of words as the hand moves to form them in writing. . . , and the meanings of words as they take their places in the contexts of sentences. (161)

She notes that a BW student has difficulty in identifying misspelled words because so many are miswritten or incorrectly inflected. Misspellings are also caused by

unpredictabilites within the English language, pronunciation, homophones, unfamiliarity with the structure of words, and failure to remember or see words.

Shaughnessy suggests that spelling can be improved by several methods. The first method deals with changing the students' attitudes about spelling. She notes that if they can "see" themselves as spellers and learn that spelling errors can be controlled then they will be encouraged to do something about their spelling problem (175).

Shaughnessy goes on to suggest that the students need to understand certain terms and operations about spelling before they can work on individual errors. From this foundational information they will see how certain rules apply to some of their own errors and they can then work on correcting them. Teaching the students how to use the dictionary to check on their knowledge of a word and how to apply the rules used in spelling a particular word will enable them to correct their own errors as they write (175-7).

Another method that Shaughnessy suggests for helping students to correct spelling errors is to develop their sense of hearing. She notes that the students must be aware of the discrepancies between their pronunciation of words and the models of pronunciation upon which the spelling system is based. An awareness of pronunciation coupled with the students' abilities to discriminate among similar sounds and a basic knowledge of graphemic patterns will help the students to correct many spelling problems (179).

When addressing vocabulary, the second aspect of the manipulation of words, Shaughnessy insists that BW students' difficulties with words does not mean that the students do not have a large vocabulary but that they don't realize how to use the words they know or how to use them correctly (189). Shaughnessy suggests that there are three kinds of learning when a student is involved with vocabulary. The first is learning about words, which includes understanding the physical, grammatical, and semantic features that make word analysis possible (211). The second kind of learning is learning words, actual vocabulary acquisition (216), and the

third kind of learning is learning a sensitivity to words, in which the BW student becomes aware of the process whereby exact choices are made in writing (221).

4. The Essay

The last major area that Shaughnessy addresses is that of the essay as a whole, putting the sentence with another sentence and building a paragraph that is built into an essay (232). The BW student has difficulty with this process for many different reasons. One of the most prominent is the inability of the BW student to sustain a flow of thought beyond the sentence that he or she is writing, an inability which produces choppy, disjointed movement within the essay. Pressed by time and unacquainted with the ways writers build their ideas, BW students begin the actual writing before they have organized their ideas, thus producing sentences with little organization or relation with each other. Because the student is by definition a basic writer, he or she is not prepared for the demands of academic writing and is not aware of the conventions that are observed within these demands.

Shaughnessy states that there are two conventions that seem fundamental to a student's understanding of the task of academic writing:

> the convention of ranging widely but in fairly predictable patterns between concrete and abstract statements, between cases and generalizations; and the convention of explicitly marking the logical and rhetorical relationships between sentences, paragraphs, and larger units of composition. (240)

By keeping these conventions in mind, a teacher can develop lessons that meet the basic needs of the student. According to Shaughnessy these needs are "the need to experience consciously the process whereby a writer arrives at a main idea or point; the need to practice seeing and creating structure in written language; and the need to recognize specific patterns of thought that lie embedded in sentences and that point to ways of developing large numbers of sentences into paragraphs and essays"(274).

Shaughnessy advocates that the BW student begin instruction with the processes that writers use to get their thoughts first and then get them underway. Only after this instruction should the student learn the techniques that writers use to help their readers understand what has been written. Because of the BW students' fears of failure and lack of experience, they must first learn that they, too, can generate ideas just as valid and just as important as those of other writers. Once they realize this ability they can go on to learn the organizational skills and the patterns of development for a completed essay.

CHAPTER 2

THE PROMISE OF COMPUTER-ASSISTED INSTRUCTION

WHAT IS COMPUTER-ASSISTED INSTRUCTION?

Simply stated, computer-assisted instruction (CAI) is the use of a computer to assist an instructor in the teaching of a particular academic subject. The technology explosion of the last several years has made it possible for every college and university to own several micro-computers to aid in the instruction of their students. This technological explosion has opened up new possibilities in teaching that were not available ten years ago.

Michael Southwell, in his article "Microcomputers and Writing Instruction," states that CAI offers four important advantages for instruction. The first advantage is that "computers offer many possibilities for enhancing the presentation of instructional materials" (591). The use of sound, graphics, color, speech synthesis, highlighting and

blinking text, as well as controlling the speed of presentation and displaying text in conceptually logical chunks, can focus the attention of the students to the most important concepts being covered in a class period.

The second advantage is that "computers offer an efficient way to manage students' use of lessons" (591). Ideally learners should control their own instruction, but Southwell points out that most students benefit more from a controlled or structured learning environment. CAI can offer a predetermined sequence of lessons with menus to help the student move from one point to another in a set of lessons insuring exposure to essential material.

The third advantage of CAI is the psychological effect on students. Southwell observes that

> Most people find dealing with ideas more stimulating than dealing with facts. Computers can take over the burden of instruction in factual matters, leaving everyone freer to spend time on what is more difficult but also more interesting. (591-592)

The tedious but necessary tasks of factual instruction, such as grammar and mechanics, can take place in another kind of setting that enhances learning. Southwell notes that developmental (BW) students who have had unsuccessful prior educational experiences respond well to instruction where they have a chance to work in privacy without exposing themselves and their lack of knowledge to their peers and teachers (592).

The last advantage that Southwell advances is the increased autotutorial power of CAI. This kind of instruction shifts the responsibility for learning to the learner. CAI "increases students' motivation" because they are able to work at their own pace in time fitted to their own personal schedules. CAI provides immediate response to their individualized needs and becomes an opportunity to learn from their mistakes (592).

WHAT KINDS OF CAI ARE AVAILABLE FOR THE BASIC WRITER?

Deborah Holdstein, in her work On Composition and Computers, breaks down the multitude of software packages of CAI into seven general categories 1) drill-and-practice, 2) tutorials, 3) simulations, 4) invention, prewriting, heuristics, 5) prose analyzers, revision software, spelling checkers, 6) integrated software: prewriting, writing, rewriting features, and 7) word-processing software. She describes these categories as

> points on a continuum: on the far left are those one might consider least flexible and most directive, perhaps the programs called "drill and practice," requiring the least user input. On the far right, in contrast, rests the most open-ended and flexible types, the most demanding of user input to justify their existence--word-processing software, for example.(10)

These categories are neither exclusive nor rigid in their definitions, but they do give a structure for looking at the various types of programs available for CAI in English.

The first type of computer-assisted instruction is drill-and-practice. This type of program is based on a workbook format where the student responds to questions and receives either a right or wrong answer. Holdstein describes it as

> something like a television textbook: its screens present students with questions on a given topic, requiring them to select the correct answers by typing in the corresponding letters. There is very little "interaction," therefore, since the students cannot enter their own texts or rewrite the sentences themselves. (12)

The complaint most often heard from writing specialists about CAI and especially about drill-and-practice is that the students do not have a sense of how to apply to their own writing the information taught. William Wresch points out

that "Drill and practice programs are linear devices that present line after line of data without deviation for error, for background, or for excitement" (485). The data that Wresch refers to are the material best learned by rote memorization, such as spelling rules or punctuation.

But even with their limitations drill-and-practice programs offer positive features. Helen J. Schwartz, in her article "Monsters and Mentors: Computer Applications for Humanistic Education," uses a program called GRAMMAR from the University of Michigan as an illustration of the benefits of computer drill-and-practice. She discusses three valuable features of this kind of CAI.

The first feature is that 'the student controls the process." Through the teacher's comments on a paper or from test results, the student can establish an individualized list of areas that need review or instruction. From a menu of lessons on the computer the student can then choose the one(s) that will be most beneficial. The student has the benefit of individualized instruction because he or she has designed his/her own program (143).

The second feature of drill-and-practice is that the "number and degree of difficulty of problems are geared to the individual student" (143). The computer can give the basic tutorial information and then calculate the number and degree of difficulty of problems based on the answers, right and wrong, given by the student. This makes it possible for the student to progress as quickly or as slowly as he or she wishes. The computer is an ever-patient tutor that gives a pat on the back for the right answers and a full explanation for the wrong ones.

The third feature noted by Schwartz is that the "form of the program is effective for learning." Most programs such as GRAMMAR are designed so that students progress by mastering principles. The programs usually draw from a large data base that enables the students to work at their own pace without running out of examples (143).

One of the largest systems for drill-and-practice programs is PLATO. This particular system has several advantages for the instructor, as well as for the student.

For example, the instructor can design a series of lessons specifically for the entire class from a long list of possibilities.[2] At various points during a given time frame, i.e., weeks or semesters, the teacher can obtain a computer readout that lists the students' names, the lessons they have completed, the degree of success for the lessons attempted and/or completed, and the number of hours each student has worked on the terminal. Wresch points out in his article "Computers in English Class," that an evaluation of PLATO by the Educational Testing Service in 1975 found that using the PLATO "had no consistent impact on either attrition or achievement." Wresch also points out that, even though there was not a marked increase in the achievements of the students using PLATO, the students seemed to enjoy using the machine and thus benefited from it by building their self-confidence(485).

The second type of CAI explained by Holdstein is tutorial software. This software "can more closely reflect the writing experience, integrating instruction with interaction and extending the ability of the student to respond beyond multiple choice to some simulation of the

composing process" (14). Unlike drill-and-practice where the answer is right or wrong, a well-designed tutorial software program will allow the student to respond with fairly sophisticated answers. In addition to responding to what the student has written, "a good tutorial program will 'branch,' following different paths of response depending on the student's input" (15). For example, the student may be working on sentence-structure information and has a question about where to place a comma. In a tutorial program that "branches," the student could ask the computor to review the rules of comma usage and then go back to working on sentence structure. Holdstein points out that some tutorials have a data base large enough for the student to go through the program several times without repeating the same examples. She points out that "like drill-and-practice software. . . a tutorial can make only limited kinds of responses to writing, and the context within which a student composes is necessarily restrictive and fairly directive" (16).

There are several kinds of tutorial software, one of which was designed by Holdstein. This program is called WRITE WELL and is an eight-part program designed to help a student with such problems as subject-verb agreement. Another program designed as an autotutorial is COMP-LAB

written by Carolyn Kirkpatrick, Mary Epes, and Michael Southwell. This program offers modules in five of the grammatical features that are the most common cause of problems for basic writers: 1) noun plural forms, 2) recognizing verbs and subjects, 3) verb agreement, 4) past-tense verb forms and 5) to-be verbs. Each module is divided into several lessons that can be completed at the student's own pace (17).

The third type of CAI program is the simulation. According to Holdstein, this form of program is less popular and less prevalent for college courses, although it has been successful at the elementary- and junior-high-school levels (16). Simulation software "pictures" certain stories or events in order to teach. One example of this software designed for college students was developed by Edward Versluis and Charles Ryberg of Southern Oregon State College. AUNT SADIE'S GIFT asks the student to write a thank-you letter for a present that was not exactly exciting for the receiver. The program offers a series of choices in salutation, opening sentence, etc. and then responds, advising the student about the appropriateness of the style, tone, and other considerations (16).

The fourth type of software--invention, prewriting and heuristics--begins to offer more to the student than drill-and-practice, tutorial, or simulation (Holdstein 16). Prewriting software helps the student to begin to write. It is written with open-ended questions that allow the student to pursue his or her own thoughts and ideas. For example, in Hugh Burn's TOPOI program, based on Aristotle's Rhetoric, the computer begins by "saying," "Now I need to find out what you are writing about, so would you please type in your subject? I am looking for one to three words." The student then types in his or her subject and the computer responds, "Hey, that's neat. We'll have a good time thinking about the price of tuna at the grocery" (or whatever the subject). As the student progresses through the program, the computer prompts thinking and composing by asking questions and making comments, such as "Tell me more" (Burns 15).

Burns's TOPOI and his other invention/prewriting programs, BURKE, based on Burke's Pentad, and TAGI, based on Young-Becker-Pike's tagmemic matrix, have spawned a number of

other invention-oriented programs. Holdstein mentions THE PARAGRAPHING PROGRAM, HBJ WRITER (WANDAH: Writing-aid and Author's Helper), HOLTCOMP, and THE WRITER'S HELPER (18). Helen Schwartz developed a program, called SEEN, that helps students with character analysis (Schwartz 47). Valerie Arms from Drexel University developed an invention program for the technical writer which she calls CREATE (Arms 355). All of these programs work on the same premise allowing students to respond to questions that encourage thinking and exploration of the subject. Holdstein cautions, however, that the programs can help only if the students take the software seriously and use it appropriately. The teacher's guidance and participation is essential for the success of the student, and it is the teacher's integration of the CAI with formal composition instruction that will define the software's "usefulness and, ultimately, its success" (20).

The fifth type of software includes prose analyzers, revision software and spelling checkers (Holdstein 20). This group of software packages treats the third and often last

aspect of the composition process. After the writer has written an essay or story, the software can check for a wide range of potential weaknesses such as faulty diction, passives, nominalizations, spelling errors, and so on. One of the inherent problems of this kind of software is that the student will assume the computer is always right, not realizing these features provide for a lot of choice and room for personal preference.

The largest system of analyzing software is THE WRITER'S WORKBENCH. Developed for the Bell Laboratories UNIX hardware system, THE WRITER'S WORKBENCH is divided into sections such as STYLE, DICTION, SUGGEST, SPELL, ORGANIZATION, DEVELOPMENT, and PROSE (Kiefer 65). Another system of this kind is HOMER, released by Scribner's Publishing. This system checks a text for a "preponderance of prepositional phrases, passive verbs, noun phrases and lengthy, shapeless sentences" (Cohen 83). Other programs, such as GRAMMATIK and PUNCTUATION AND STYLE, also serve the same purposes but are less expensive and run on home computers (Holdstein 21).

The sixth type of system that Holdstein describes is the integrated software package. These systems incorporate three

general phases of the writing process: "(1) prewriting or planning, (2) writing (generally with a word-processing section designed for the package), and (3) rewriting or revision activities" (24). The student may begin with a prewriting activity and go on to write a first draft. At some point the student may want to review how to write a topic sentence so he or she can "branch" to a tutorial on writing effective topic sentences. The student can then return to the composing part of the program and proceed with the composing. Holdstein points out that a good integrated package will allow for flexibility by the students and the instructor. The package should permit the student to move quickly and easily from one part of the package to another without a lot of commands or keystrokes and should also allow the instructor to create prewriting questions or tutorials in addition to those already built in to the system.

Holdstein mentions two particular packages that use integration for composition--THE PARAGRAPHING PROGRAM, and the ACCESS system from the University of Minnesota. The ACCESS program is designed for complete input by teachers, who can then design their own lessons, while THE

PARAGRAPHING PROGRAM takes the student through a self-contained program that begins with prewriting and progresses through a finished draft (26). Another integrated package is HBJ WRITER, WANDAH. This package begins with prewriting aids such as freewriting, nutshelling, planning and invisible writing and proceeds to the word processor. While composition is going on or after the draft is finished, the WRITER can then be used for reviewing and revising by checking for mechanics, style, organization, spelling, punctuation, or word use. WRITER can also check for transition words and will allow for peer interaction by using the commenting aid whereby other students can view the essay and make critical comments about it (Von Blum 154).

Still another program is WORDSWORTH II. This particular program is designed for the eight commonly given writing assignments of the college composition class--description, narration, classification, evaluation, persuasion, writing in personal journals, comparison and contrast, and writing about literature. The program is separated into two stages--planning and polishing--which allows the students to

review lecture points about the kind of writing they will be doing and begin drafting the text while working on audience, focus, organization, and other rhetorical features (Selfe 175).

The last type of CAI mentioned by Holdstein is the word-processing package. This kind of computer program is popular in the business world because of the multitude of ways it handles and revises text (26). Moving text from one place to another, changing, correcting, adding or deleting words or whole sections are done with a press of a correct key. Linda Knapp, in The Word Processor and the Writing Teacher, says that "[The word processing program's] biggest boon for writers is that it's possible to revise drafts over and over without having to retype the whole thing. A writer can even complete several drafts of a piece before printing it" (3).

Word-processing packages are usually divided into groups by cost, the package with the most features costing more. Inexpensive programs, such as PERSONAL QWERTY, WORDVISION or TEXTRA, combine the ability to write text with a few

"extras," such as being able to move large chunks of text or having an automatic return when the end of the line is reached. Moderately priced programs, such as EASYWRITER, PEACHTEXT, or PERFECT WRITER, add more features such as the capability to create footnotes, indices, and tables of content. The highest priced programs, such as MULTIMATE, WORDSTAR, or WORDPERFECT, offer a multitude of features ranging from automatic spell checking to the ability to merge documents with other data stored on the same data disk.[3]

As computer technology advances, more and more programs are becoming available to the student as well as the instructor. Many textbook publishers are designing software to accompany their textbooks. Most universities are revising their English curriculua to include writing on a computer. All of these advances are very exciting, but the question remains as to whether CAI can help basic writers to improve their writing.

CHAPTER 3

MERGING COMPUTER-ASSISTED INSTRUCTION WITH THE PEDAGOGY OF THE BASIC WRITERS

Shaughnessy reminds the reader of her book that "The goals of a basic writing course are generally practical, namely, the development of a readable expository style that will serve for courses and, later, for professional or civic writing assignments" (280). But just how does an instructor facing a class of basic-writing students manage to reach these goals? Can computer-assisted instruction help? If we return to Lynn Troyka's description of BWs, we can see that CAI has some very distinct advantages helping to meet the goals as set by Shaughnessy.

CAI and the Basic Writer

The first characteristic that Troyka mentions is the need for BWs to feel "safe" in the learning environment (20). Colette Daiute points out that "Computer users tend to feel in control of the writing process. They are instructing a powerful machine to carry out massive and tedious editing tasks instantly" (142). When writers realize that they

are working on a one-on-one basis with the computer, they are released to learn because they no longer fear embarrassment if they make a mistake. Helen Schwartz, in her article "Teaching Writing with Computer Aids," notes that "Creating words on a video screen is like whispering: it seems less threatening than the usual mode of articulation" (245).

The second characteristic discussed by Troyka is the need of BWs for immediate response because they are more orally inclined (22). The response time of an instructor in a writing class can range from several minutes to several days, thus frustrating the writer. With CAI the writer can receive immediate feed back for his/her efforts. In a drill and practice program the student knows immediately whether an answer is right or wrong. In the tutorial or invention software the writer is prompted with additional questions that will encourage deeper thought. Integrated software packages have the advantage of checking immediately for such items as spelling, grammar mistakes, and mechanical errors and suggesting possible ways of correcting the problems.

Troyka then suggests that BWs are "holistic" writers needing to see the entire work before it can be broken down into the various parts (22). The computer can act as the "memory" of the student and thus free him to continue his train of thought to completion. When the student has finished the entire essay and has the "whole" printed out before him, he can then begin to break it down into parts: i.e., paragraphs and then sentences. Using software designed for analysis can help the writer to see the problem areas of his work and thus be able to correct the pieces of the puzzle in order to have a better whole.

The last "legacy" of the Basic Writer is the ambivalence of the non-traditional student to the learning process (24). Using CAI offers the student a novel, non-threatening, often enjoyable method of learning. Many writers are encouraged to take risks because of the ease in revising (Daiute 136). "Basically, then, the computer encourages learning by offering enjoyment and by repeating rules: the mode of delivery may be modern, but the method of teaching is well-tested" (Breininger 359).

Knowing that CAI can help BWs overcome the barriers they may have built up toward learning and writing in particular is not enough. Steps must be taken to use CAI to correct the common errors, as outlined by Shaughnessy, and then to transfer this new-found knowledge into the student's actual writing. Only then can the writer hope to be able to communicate effectively with the written word.

As was seen earlier, the first problem that a BW student faces is overcoming the lack of actual practice in the act of writing. Shaughnessy suggests that a course in typewriting would help the student in actually putting words to paper (16). The computer would assist the student even further, in that as the student "types" he/she can see the sentences forming on the computer screen. The words look like lines from a textbook and can be much more easily read than the handwritten word that is often blurred because the student is unsure of usage and/or spelling. Errors are easier to identify and can be corrected with just a few key strokes.

Once the student is taught how to use the computer, all of the composition work, including journal writing, free writing and essays, can be stored on one or two computer disks. This eliminates the need for reams of paper that have a tendency to become crumpled and smudged. The student can produce a fresh copy of his/her work at the touch of a few keys, or can even hand in the entire disk for comments or grading. After the work has been evaluated, corrections and revisions can be done quickly and easily.

CAI in the Writing Course

Shaughnessy gives a suggested outline of a BW course that can easily be adapted to include CAI. She recommends that the course be conducted in a workshop setting, meeting five days a week for at least one class period per day, preferably two. The writing assignments would be introduced using one class session every two or three weeks. Once a week, class instruction would focus on the sentence and on words. The remaining three to four days a week would be devoted to supervised writing practice (288).

Shaughnessy also recommends that in a class of fifteen students there be at least one teacher and two student tutors in attendance during the writing sessions. Tutors could also be used to supplement the formal lessons on sentences and words by conducting practice sessions in a writing center (288). This ideal situation is not necessarily a practical one in this era of budget cuts and program eliminations. The computer, however, could serve as a surrogate tutor doing much of the work of identifying mechanical errors and recommending ways of correcting them.

Writing Assignments

Shaughnessy goes on to recommend that "Writing assignments for this first semester should aim at developing the students' perceptions of rhetorical structure and at introducing the first three thought patterns" (i.e., narration, description, comparison/contrast). Two papers, the first drawing upon familiar models and the second on less familiar models that are common to academic writing, should be required from each student. A full session would be devoted to introducing the assignment, making sure that the

assignments themselves are fully explained as to length, structure and possible difficulties. Each assignment would also be accompanied by at least two examples, one of which would be by a student. (288).

After the assignment has been thoroughly explained and questions answered as Shaughnessy suggests, the students could more to the computer to begin to generate their ideas through the use of an invention, prewriting or heuristic software program. If necessary, a program that lists various topic ideas can be used to get the students thinking. After the students have completed the prewriting exercise they can begin to write the first draft using a word-processing program.

Shaughnessy recommends that "Suggestions and criticism should keep pace with the students' daily work, and students should be free to request editorial help while they are writing" (288). This is not always possible with increasing class sizes. To lighten the load for the instructor, a prose-analyzer program, a spell-check program, or an integrated-software package could be utilized so that the students could check for grammatical and spelling mistakes on their own. The instructor would then be able to work with the students on global matters such as organization of ideas, development of content, and so forth.

CORRECTING STUDENT ERRORS

According to Shaugnessy, "Lessons on the sentence and on words should be aimed at developing in students a conceptual grasp of their difficulties with syntax, inflections, and punctuation" (289). In her course outline, Shaughnessy suggests that weeks 1-5 be devoted to combined work on syntax and punctuation. Weeks 6-7 should be devoted to spelling with an emphasis on the principles of word formation and diagnostic techniques. After the initial spelling instruction individualized instruction could be given to the students. Instruction during weeks 8-12 would center on the common errors. Weeks 13-15 would then be devoted to vocabulary (289).

WEEKS 1-5 SYNTAX AND PUNCTUATION

Shaughnessy points out that "Young men and women who have spoken years of sentences cannot be said to be ignorant of sentences" (72). They do have, however, difficulty in

managing sentences in an academic situation. Shaughnessy suggests that this difficulty can be explained in three ways with each explanation offering a different pedagogical approach to the problem.

The first explanation offered by Shaughnessy focuses on language patterns characteristic of written English. This explanation lends itself to a pedagogy that stresses grammar instruction. It assumes that the students must learn explicitly the forms to be generated and proceeds to instruct through practice with sentences. The second approach focuses on the composing process. This explanation lends itself to a pedagogy that stresses process and minimizes the value of grammatical and rhetorical study. The last method emphasizes the writer's attitude toward being a writer. The pedagogy suggested with this explanation "stresses the therapeutic value of writing and seeks the affective response to whatever is read or discussed" (73). This pedagogy is more concerned with building the confidence of the writer rather than with form or process. Shaughnessy suggests that "A teacher should not have to choose from among these pedagogies,for each

addresses but one part of the problem" (73). With the help of CAI the teacher can develop lessons that satisfy all three pedagogical approaches.

Language Patterns

According to Shaughnessy, "To revise a sentence a writer must have a way, a place, a strategy for breaking into it, but beginning writers tend to experience their sentences as unmanageable streams of words which, once set in motion, cannot be turned back" (78). The BW instructor, therefore, must approach the sentence as a whole and then help the student see the individual parts. Using a computer as a tool, the instructor can take the whole and divide it into its parts, much like a child will take a clock and, by taking it apart, learn how it works. First the child looks at the whole and then with small tools breaks it down.

CAI can be a valuable tool when teaching language patterns. Using both the BW's writing and the writing of professional writers, the instructor can lead the students through a thorough study of how a sentence works. Shaughnessy suggests an outline of study that would first concentrate on the concept of the sentence and then move on to include recognizing subjects and predicates, practicing basic types of embedding, recognizing fragments, linking sentences, capitalization and quoting (41-43). Using this outline as a model, the instructor would use tutorial software to begin the study. This tutorial could be designed to use either a writing example of the instructor's choice or an example taken from an essay written by the student. Appropriate questions and instructions could be formulated that would enable the student to recognize the sentence. The student could then proceed to break the sentence down into its various parts or build the sentence from a kernel to one that is much more complex using subordination and coordination, expanding phrases, and embedding words.

The second type of CAI that could be used in the instruction of language patterns would be prose analyzers. The students could write a short passage and then have the computer analyze the passage. From the response of the computer the students would then begin to break down the sentence(s) or revise the sentence in response to the needs of the particular sentence. For example, if a student writes a passage that contains too many passive voice verbs, the computer would point that out to the student. The student would then be able to revise the sentences so that the active voice is used.

An instructor could also use a word processing package to design various lessons. A passage could be placed on the computer and networked with the entire class. The class could then collectively begin to revise the passage, breaking it down, or even diagramming the various sentences so that the passage is taken from the whole and disassembled into manageable parts.

The last type of software that could be used in studying language patterns would be that of drill and practice.

Exercises formulated by the instructor or even a "canned" program designed by the various handbook publishers could be assigned to the students. This type of instruction, while reviewing important rules, is less likely to allow the students to transfer the knowledge gained into their own writing. Using the students' own writing is far more effective because they know what they are trying to say and thus have a vested interest in making sure that the exact meaning comes across to the reader. They are usually more interested in what they are trying to say than trying to figure out what someone else is trying to say. If the students can use their own writing as examples, they become intimately acquainted with their own sentences and can revise them all the more productively.

COMPOSING PROCESS

Shaughnessy points out that the problem of unfamiliar forms in language patterns merges with the second pedagogical problem in that the beginning writer does not know how writers behave (79). The BW tends to think of the finished

product and not how a writer comes to that end. They often think that they must get their writing correct the first time and are dismayed if they don't. Teachers often promote this idea by showing examples of professional writings without showing the stages that a writer goes through.

Shaughnessy suggests a "sequence of concentrations" that are "implicit in the act of writing" but may be lost to the Basic Writer.

> 1. Getting the thought - recognizing it, first, then exploring it enough to estimate one's resources (motivational and informational) for writing about it.
>
> 2. Getting the thought down - proceeding, that is, into the thick of the idea, holding on to it even as the act of articulation refines and changes it.
>
> 3. Readying the written statement for other eyes, a matter of catching whatever in the content or form is likely to deflect the reader's attention from the writer's meaning (81-82).

Using this sequence, the instructor can begin to formulate CAI that will concentrate on each step.

The first type of CAI that would be beneficial would be a heuristic package (WANDAH, HOLTCOMP, etc.). This type of software would lead the students into exploring various subjects and determining whether or not they would even be able to write about them. Appropriate questions and comments made by the program would lead the students into determining the resources available for a particular subject.

A simulation program would also be beneficial in the early composing stages. If the package were designed to fit the different rhetorical forms, the student could construct an essay using the computer's suggestions and corresponding comments. This program could be designed to suggest different sentences to fit into the proper places. The student could "write" the essay knowing that the sentences were grammatically correct. The practice would encourage them to experiment with different ways of saying what they want to say in their own essays.

From a heuristic or simulation program the students could proceed into the actual writing of a draft using a word

processing or integrated package. During this process the computer acts as the memory for the student writers so that they can become involved with their subject without the fear of losing what they have already thought about. Using an integrated package would allow students to explore the various subtopics that would be in their outline, thus allowing them to develop not just a thesis statement but also topic sentences and the information needed to develop those topics.

After the students have completed their drafts, prose-analyzing programs would help them in their proofreading. Timing is an important factor here. Students would be able to get a response as to the "correctness" of an essay before handing it in to the instructor for a grade. The computer thus becomes a surrogate teacher, helping the students learn to see their errors without the fear of embarrassment or failure. Because the draft is computer generated it can be revised and corrected any number of times with just a few key strokes. This frees students from the fear that if they don't get it right the first time they will

have to do the entire essay all over again. They can also experiment with different ways of saying the same thing without "messing up" the entire essay, thus freeing them to expand their vocabularies and to be more daring in the way they construct their sentences.

All of this instruction and careful use of CAI helps to overcome the third composing problem-- the lack of confidence he has in himself as a writer. With the use of CAI the student has grasped a thought and developed that thought into an essay. He has checked his writing for any errors and may have even experimented with different ways of saying what he wants to say. Because he has had immediate response from an "expert" (i.e., the computer), he feels that he can indeed accomplish this rather difficult task of writing. As his confidence grows he begins to write in other situations rather than just that of the writing class. At this point, having various heuristics or integrated software packages that would be discipline specific would allow the student to expand his writing experiences even more. He would be able to experiment with writing in his major without the fear of exposing his lack of knowledge about his major or about his writing in general.

WEEKS 6-7 SPELLING

Shaughnessy suggests that only a short time be devoted to actual class instruction on spelling. This instruction would focus on the principles of word formation and diagnostic techniques. After this initial instruction then the lessons could be individualized (289). She goes on to suggest that there are eight different ways of helping the student to overcome spelling difficulties.

The first "help" is to "assume at the outset that the misspellings of young adults can be brought under control" (175). The lack of confidence in BWs can be greatly helped by the computer because they can catch their errors before the "authority" sees them. If the teacher encourages the students and helps them to see themselves as spellers, then they will be able to see beyond their errors. The key here is using the spell-checker program as a diagnostic tool. When the student checks her work she can make a list of those words that the computer points out. From this list a pattern of errors can readily be discovered, not only by the teacher but also by the student herself.

The use of a spell checker as a diagnostic tool helps students in the second way Shaughnessy suggests BWs can be helped, that is to begin teaching students to observe themselves as spellers. If they can see that they are spelling more words correctly than incorrectly, they can see that spelling is not the insurmountable problem that they first thought. A record of spelling errors and/or a chart that shows where the problems lie then leads into the third help suggested by Shaughnessy.

"Before attempting to work on individual errors, make certain that the student understands certain terms and operations" i.e., consonant, homophone, etc.(177). This instruction can be done by using drill and practice and/or tutorial programs. Simulation programs with a "voice" can also be used in order to help the student sound out the written word, dividing it into syllables. After the terms and operations are mastered then the student can proceed to the fourth help.

"If possible start to work on misspellings that can be controlled by the application of rules" (177). At this point a program using drill and practice or tutorials, where the

student can fit individual errors into the program and have them explained through the use of terms and operations, will go far in helping him overcome the errors. Thus if a student has a particular problem with the i before e rule, he can use words that he has actually written and then have the correct spelling explained to him. Because of the novelty of working on a computer, the students might also benefit from the use of drill and practice exercises. These exercises, however, would be much like the spelling books used in traditional education, and it must be noted that if they didn't work with the student before now, they probably won't work.

In the fifth "help," Shaughnessy suggests developing "an awareness of the main discrepancies between the student's pronunciation of words and the models of pronunciation upon which the spelling system is based" (179). Using an integrated program that incorporates voice, the computer could "dictate" a list of homophones or other difficult words, and the student could then spell them on the computer. The computer can then give instant response on the correctness of the word and proceed on to rules that govern

the word. This practice would flow naturally into the sixth help, "develop an awareness of the ways in which pronunciation helps the speller" (179).

Using drill and practice or tutorial, or even simulation, software can help the student study a list of words that demonstrate phonemic-graphemic principles. Using these programs to develop the awareness of pronunciation then leads into the seventh help, "develop the student's ability to discriminate among graphemic options" (181).

Shaughnessy suggests that "audio-visual instruction, by concentrating the aural and visual experience of words and by enabling the student to move at his own pace, serves to accelerate this kind of learning for most students" (182). The computer can offer a wide array of visual instruction, as well as the audio instruction I have already mentioned. Using a color monitor to highlight different graphemic options lets the student see words in a variety of ways. The learning that has been building becomes visual, as well as auditory, when the student uses his own list of spelling errors as the examples, thus increasing his chances of retaining what he has learned.

The last help that Shaughnessy suggests, "develop precision in viewing the written word" (182), is made easier because the computer shows the words as if they were printed text. The student can see clearly on the screen what would be blurred by penmanship. Using exercises in a drill and practice or tutorial program where the student must correct passages that are dense with misspellings helps them see and correct those errors, giving additional practice in overcoming spelling errors and gaining confidence as a speller.

The ninth help, "teach the use of the dictionary" (185), can be done by using an integrated package that allows the student to check a computer dictionary at the touch of a few keys while they are actually writing or revising their work. If the students lack even rudimentary knowledge of the dictionary, then a tutorial program can help. Shaughnessy even suggests that "anti-spelling bees" be conducted that require students to look up words they have never heard before (185). This too could be done by using a simulation program where a list of words is dictated to the student by the computer and then the student must scan a dictionary in

order to find them. Once found, the word could be highlighted on the screen and points scored for the student. The instructor could also load a series of words that would focus on particular spelling problems of individual students so that the "spelling bee" is individualized.

WEEKS 8-12 COMMON ERRORS

Shaugnessy notes that "The `mystery' of errors is what most intimidates students--the worry that errors just `happen' without a person's knowing how or when" (128). The first thing that a BW instructor must do is to show the students that the study of grammar is more a way of looking at sentences than a set of rules and regulations that are "imposed like laws on errant writers. They must learn to look at sentences in order to understand the way they work rather than what they mean" (129). Shaugnessy suggests that the best way of promoting this outlook on grammar is to isolate the grammatical elements of the sentence. Shaugnessy further notes that the grammar which students study for the purpose of reducing errors should accomplish two objectives. The first objective is to introduce them to several key grammatical concepts that underlie many of their difficulties

with formal English. The second objective is to equip them with a number of practical strategies for checking their own writing. These goals and objectives can be achieved in a variety of ways.

Shaughnessy notes that there are generally four grammatical concepts that are the cause of most of a BW's misunderstandings about forms. The first concept that Shaughnessy mentions is that of the sentence. If the instructor has already worked on sentences during the first few weeks of the semester, the student should already be somewhat familiar with the way sentences are expanded and/or contracted.

Using a drill and practice program, the student would study a variety of word groups that are punctuated as sentences but that are not acceptable for lexical or grammatical reasons. A tutorial program could use the same word groups, but the student would be instructed to correct the sentences. Exercises like these force students to first distinguish acceptable from unacceptable sentences and then require them to analyze the reasons behind these judgments (Shaughnessy 130).

The student could also use a word-processing program to create his/her own sentences and either expand or contract them as instructed. All the while the instructor or computer should be explaining the why, as well as the how, of using the various grammatical devices.

Shaughnessy notes that this intensive study will bring about positive results: "The perception of the sentence as a structure rather than a string of words is probably the most important insight a student can gain from the study of grammar, an insight that is likely to influence him not only as a proofreader but as a writer" (133).

The second concept that Shaughnessy identifies as essential for correcting errors is grammatical inflection. She suggests that "the approach to teaching these inflections ought to be multi-dimensional, attending to the sound and look of these letters (i.e., -s (-es) and ed), as well as to the rules that control their use" (133).

A series of lessons using the drill and practice or tutorial softwares could be assigned to the student. A particular rule such as adding -s to third-person verbs, would be discussed, and then practice using the rule would

follow. If the student were using his/her own writing, then a prose analyzer could be used to point out the inflection problems. By "trunking" (interjecting a mini-lesson that addresses a particular error within the essay as it is being written) the student could move from her own prose to a lesson on using -ed, for example, and then back to her own prose for correction.

According to Shaughnessy, the third concept, that of tense, involves two different kinds of learning. The first kind "requires that the student have a grasp of the formal system for producing tense changes; the other, that he develop an 'ear' for tense combinations in a range of situations" (135).

The task of teaching the student to grasp the formal system of verb tense can be accomplished by straight instruction using tutorial software. The lessons could simply be read and then examples or exercises incorporated for practice. The task of developing an "ear" for tense combinations can be accomplished by using drill and practice, as well as tutorial software. Various drills using the tense system could be incorporated into the tutorial lessons. Pattern practice that supports analogical learning could also be developed using the tutorial or drill and practice programs. Prose analyzers evaluating the student's own work would test whether the lessons have been internalized.

The fourth concept, that of agreement, can be taught by straight instruction involving tutorials, as well as drill and practice programs. Again, prose analyzers could be used to evaluate the student's work.

The concepts of inflection, tense and agreement could also be taught by having the students use a word processing program to practice changing person, tense, and number in a passage already written or one created by the students. This kind of practice, especially using the students' own writing, would make them more sensitive to the possibility of errors in the sentence. With an integrated program the student could look at a passage, with or without errors, and check his/her understanding of grammatical principles.

Shaughnessy notes that "What is most useful [in correcting errors] is a repertoire of approaches to a relatively small number of problems. . ." (156). CAI can help to develop and refine that repertoire.

WEEKS 13-15 VOCABULARY

The last weeks of a semester's work includes the study of vocabulary. Shaughnessy explains that within the relatively limited time available to teach vocabulary an instructor must involve three kinds of learning: 1) learning about words, 2) learning words, and 3) learning a sensitivity to words (211).

Shaughnessy goes on to explain that learning about words involves "the kind of information about words as physical, grammatical, and semantic entities that makes analysis possible." Learning words "is to absorb specific words into one's active vocabulary." The last kind of learning, that of developing a sensitivity to words, involves becoming "aware of the process whereby exact choices are made in writing" (211).

The areas of learning about words and learning words could be supported through various forms of CAI, ranging from drill and practice programs that teach roots, prefixes, and suffixes to simulations or tutorials that teach specific vocabulary. The newest technology of CD ROM might even use programs that were field specific, allowing a student to broaden his/her vocabulary in an area in which he/she is vitally interested.

In the third area--that of learning a sensitivity to words--the CAI could involve the student's own writing. Shaughnessy suggests three ways whereby the student can experience the process of generating words synthetically by 1) substitution practice, 2) observation of first drafts and 3) reading (222).

Using an integrated program in substitution practice, the student can look at a passage, either self-generated or pre-programmed by the instructor, and can then substitute an underlined word with a word pulled from an on-line thesaurus. The student can then analyze the denotative and/or connotative meanings of the word that occur. If the passage is self-generated, the writer can then choose an option from the thesaurus that is specific to what he/she is trying to say or defend the first choice by showing how the options change the meaning (222).

The second exercise, that of observing first drafts, can be accomplished several ways with CAI. Using a word-processing package, the entire class can write an essay.

This kind of collaborative learning would involve taking the students step by step through the drafting of an essay or paragraph. Using networking, each student can see the draft as it grows and changes. Programs that can place the first and second draft of a self-generated or teacher-programmed essay visually together allow the student to see the differences in the drafts. Prose analyzers help with the growth of drafts by offering questions about the author's choices of structure or vocabulary.

CAI can also be used for the third exercise, that of reading and responding to reading. Using tutorial or integrated programs, the student can begin to respond to a written passage. Questions about the text prompt the student to respond and to discover what in the text or the reader's experience elicited that response. The student would then move through additional questions to "map the thinking of the writer and finally to see in relation to that map where he, as one reader, traveled" (Shaughnessy 223). Shaughnessy points out that "Reading in this way, the student begins to sense that the meaning of what he reads or writes resides not in the page nor in the reader but in the encounter between the two" (223).

CONCLUSION

Using CAI in a basic-writing classroom is not a magic wand that will, over the course of a semester or two, transform a student into a great writer. It is a tool, and just like any tool it is the craftsman who determines its usefulness. As Shaughnessy points out in the very beginning of her book,

> It (the book) assumes that programs are not the answers to the learning problems of students but that teachers are and that, indeed, good teachers create good programs, that the best programs are developed *in situ*, in response to the needs of individual student populations and as reflections of the particular histories and resources of individual colleges (6).

CAI programs, while developing rapidly and improving dramatically, are only so many exercises in futility if the instructor does not take the time to help the students develop their own learning plans. Like the traditional exercises in a workbook, CAI instruction can be assigned with just a hope that the instruction will sink in. But the

novelty of the technology and the "safe" environment that working with a computer generates can be the beginning keys to unlocking the world of writing to those students who know what they want to say, but don't know how to say it.

ENDNOTES

1. Throughout this thesis I will be using the 1979 paperback edition of Shaughnessy's work Errors and Expectations, New York, Oxford University Press.

2. Susan Webb Hartstirn and Pauline E. Kayes, Parkland College, Champaign, IL., have produced an annotated catalog of over 300 lessons in English composition, grammar and usage from PLATO. English Composition, Grammar, and Usage Lessons on PLATO: an Annotated Catalog for College Instruction (Champaign, Illinois: Parkland College, 1987). This volume is available for purchase through Parkland College.

3. Brian Gallagher of LaGuardia Community College has written an excellent monograph, Microcomputers and Word Processing Programs, which evaluates and critiques most of the word processing packages on the market as of March, 1985. He divides the programs by cost and then details the features offered by each program. He offers

a critique as to the ease of use and how effective the program might be in a classroom setting. Microcomputers and Word Processing Programs, Research Monograph Series Report No. 9, Instructional Resource Center, Office of Academic Affairs, The City University of New York, 535 East 80th Street, New York, NY, 10021.

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COMPUTER ASSISTED INSTRUCTION AND THE BASIC WRITER

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